Claims

1. A method for treating a patient who has an immunoinflammatory disorder or a proliferative skin disease, or is at risk for developing an immunoinflammatory disorder or a proliferative skin disease, said method comprising administering to said patient a prostaglandin and a retinoid, wherein the prostglandin and the retinoid are administered simultaneously or within 10 days of each other, in amounts sufficient to treat said patient.

2. The method of claim 1, wherein said prostaglandin is alprostidil, misoprostil, dinoprostone, prostaglandin E2, prostaglandin A1, prostaglandin A2, prostaglandin B1, prostaglandin B2, prostaglandin D2, prostaglandin F1α, prostaglandin F2α, prostaglandin I1, prostaglandin-ici 74205, prostaglandin F2β, 6-keto-prostaglandin F1α, prostaglandin E1 ethyl ester, prostaglandin E1 methyl ester, prostaglandin F2 methyl ester, arbaprostil, ornoprostil, 13,14-dihydroprostaglandin F2α or prostaglandin J.

3. The method of claim 2, wherein said prostaglandin is alprostadil or misoprostil.

4. The method of claim 1, wherein said retinoid is tretinoin, retinal, retinol, vitamin A2, α-vitamin A, 13-cis-retinol, isotretinoin, 9-cis-tretinoin, 4-hydroxy all-trans retinoic acid, torularodin, methyl retinoate, retinaldehyde, 13-cis-retinal, etretinate, tazoretene, acetretin, alitretinoin or adapelene.

5. The method of claim 4, wherein said retinoid is tretinoin.

6. The method of claim 1, wherein said prostaglandin is alprostidil and said retinoid is tretinoin.

7. The method of claim 1, wherein said prostaglandin and said retinoid are administered within 5 days of each other.

8. The method of claim 7, wherein said prostaglandin and said retinoid are administered within 24 hours of each other.

9. The method of claim 8, wherein said prostaglandin and said retinoid are administered within one hour of each other.

10. The method of claim 9, wherein said prostaglandin and said retinoid are administered simultaneously.

11. The method of claim 1, wherein said immunoinflammatory disorder is rheumatoid arthritis, psoriasis, ulcerative colitis, Crohn's disease, an inflammatory dermatosis, septic shock syndrome, or stroke induced brain cell death.

12. The method of claim 1, wherein said inflammatory dermatosis is psoriasis.

13. The method of claim 1, wherein said proliferative skin disease is contact dermatitis or acne.

14. The method of claim 1, wherein said prostaglandin and said retinoid are administered to said patient by intravenous, intramuscular, subcutaneous, rectal, oral, topical, intravaginal, ophthalmic or inhalation administration.

15. The method of claim 14, wherein said prostaglandin is administered in an amount of 1 pg to 100 mg per day, and said retinoid is administered in an amount of 50 ng to 5 g per day.

16. The method of claim 15, wherein said prostaglandin is administered in an amount of 10 pg to 10 mg per day, and said retinoid is administered in an amount of 500 ng to 1 g per day.

17. The method of claim 16, wherein said prostaglandin is administered in an amount of 100 pg to 1 mg per day, and said retinoid is administered in an amount of 5 μg to 100 mg per day.

18. The method of claim 17, wherein said prostaglandin is administered in an amount of 0.01 ng to 0.5 mg per day, and said retinoid is administered in an amount of 50 μg to 50 mg per day.

19. A pharmaceutical composition comprising a prostaglandin, a retinoid, and a pharmaceutically acceptable carrier, wherein said prostaglandin and said retinoid are each present in amounts that, when administered together to a patient having an immunoinflammatory disorder, inhibit or reduce immunoinflammation or dermal/epidermal proliferation.

20. The pharmaceutical composition of claim 19, wherein said prostaglandin is alprostidil, misoprostil, dinoprostone, prostaglandin E2, prostaglandin A1, prostaglandin A2, prostaglandin B1, prostaglandin B2, prostaglandin D2, prostaglandin F1α, prostaglandin F2α, prostaglandin I1, prostaglandin-ici 74205, prostaglandin F2β, 6-keto-prostaglandin F1α, prostaglandin E1 ethyl ester, prostaglandin E1 methyl ester, prostaglandin F2 methyl ester, arbaprostil, ornoprostil, 13,14-dihydroprostaglandin F2α, or prostaglandin J.

21. The pharmaceutical composition of claim 20, wherein said prostaglandin is alprostidil or misoprostil.

22. The pharmaceutical composition of claim 19, wherein said retinoid is tretinoin, retinal, retinol, vitamin A2, α-vitamin A, 13-cis-retinol, isotretinoin, 9-cis-tretinoin, 4-hydroxy all-trans retinoic acid, torularodin, methyl retinoate, retinaldehyde, 13-cis-retinal, etretinate, tazoretene, acetretin, alitretinoin or adapelene.

23. The pharmaceutical composition of claim 22, wherein said retinoid is tretinoin or retinol.

24. The pharmaceutical composition of claim 19, wherein said prostaglandin is alprostidil and said retinoid is tretinoin or retinol.

25. The pharmaceutical composition of claim 19, wherein said prostaglandin and said retinoid are suitable for intravenous, intramuscular, subcutaneous, rectal, oral, topical, intravaginal, ophthalmic or inhalation administration.

26. A pharmaceutical pack comprising a prostaglandin and a retinoid.

27. The pharmaceutical pack of claim 26, wherein said prostaglandin is alprostidil, misoprostil, dinoprostone, prostaglandin E2, prostaglandin A1, prostaglandin A2, prostaglandin B1, prostaglandin B2, prostaglandin D2, prostaglandin F1α, prostaglandin F2α, prostaglandin I1, prostaglandin-ici 74205, prostaglandin F2β, 6-keto-prostaglandin F1α, prostaglandin E1 ethyl ester, prostaglandin E1 methyl ester, prostaglandin F2 methyl ester, arbaprostil, ornoprostil, 13,14-dihydroprostaglandin F2α, or prostaglandin J.

28. The pharmaceutical pack of claim 26, wherein said retinoid is tretinoin, retinal, retinol, vitamin A2, α-vitamin A, 13-cis-retinol, isotretinoin, 9-cis-tretinoin, 4-hydroxy all-trans retinoic acid, torularodin, methyl retinoate, retinaldehyde, 13-cis-retinal, etretinate, tazoretene, acetretin, alitretinoin or adapelene.

29. The pharmaceutical pack of claim 26, wherein said prostaglandin and said retinoid are formulated separately and in individual dosage amounts.

30. The pharmaceutical pack of claim 26, wherein said prostaglandin and said retinoid are formulated together and in individual dosage amounts.

31. A method for identifying combinations of compounds useful for treating a patient having an immunoinflammatory disorder or proliferative skin disease, said method comprising the steps of:

(a) contacting white blood cells *in vitro* with (i) a prostaglandin or a retinoid, and (ii); and a candidate compound; and

(b) determining whether the combination of said prostaglandin or retinoid and said candidate compound reduces TNFα levels in said white blood cells relative to white blood cells contacted with said prostaglandin or retinoid but not contacted with said candidate compound, or white blood cells contacted with said candidate compound but not with said prostaglandin or retinoid, wherein a reduction of said TNFα levels identifies said combination as a combination that is useful for treating a patient having an immunoinflammatory disorder or proliferative skin disease.